

VOLUME 3.

NUMBER 4.

JULY-AUGUST 1901.

# THE CONDOR.



Cooper Ornithological Club.

ALL RIGHTS RESERVED.

Santa Clara, California.

. . . CONTENTS . . .

	Page
FRONTISPICE, Afield in California ( <i>page plate</i> )	90
Breeding of <i>Hesperocichla nevadensis</i> in California	Walter K. Fisher 91
The Santa Cruz Song Sparrow, with Notes on the Salt Marsh Song Sparrow	Joseph Grinnell 92
Two Years With Mexican Birds: III. Some Plantation Birds	E. H. Skinner 93
Scott's Oriole at San Diego, Cal.	Frank Stephens 94
An Exceptional Set of Eggs of the Wood Duck	Walter B. Sampson 95
A New Species of Geospiza Collected by the Hopkins-Stanford Expedition to the Galapagos Islands	Robert E. Snodgrass and Edmund Heller 96
An Outing for Owls' Eggs	P. M. Silalloway 96
The Bullocks and Arizona Hooded Orioles	J. F. Illingworth 98
Notes on Some Little-known Birds of Southern California	Edmund Heller 100
Two Amusing Incidents	A. I. McCormick 101
The Harpy Eagle ( <i>photographed from life</i> )	Mollie Bryan 102
A Study of the Birds of Santiago Canyon	Mollie Bryan 103
ECHOES FROM THE FIELD: Western Evening Grosbeak Again; Early Nesting of the Red-bellied Hawk; Parasites in Birds; Curious Nest of Anna's Hummingbird; Breeding of the Western Robin in Lake Co., Cal.; Notes on the Loon, Western Evening Grosbeak and Broad-tailed Hummingbird	104 106
Pacific Coast Changes in the Check-List	106
COMMUNICATIONS: A Boon for Oologists; Use of Collodion to Prevent Arsenical Poisoning	106
GENERAL NEWS NOTES: Death of Francis J. Birtwell; Return of Galapagos Expedition	107
EDITORIAL	108
Save the Birds' Stomachs	108
Query Column	109
A Suggestion for Forming Chapters	Frank S. Daggett 109
Publications Received; Official Minutes	110
Snapshots at Prominent Ornithologists: No. IV, Mr. John H. Sage	(page sketch)

## COMPLETE YOUR FILES

OF PUBLICATIONS OF THE  
COOPER ORNITHOLOGICAL CLUB OF CALIFORNIA.



*VOLUME I* can no longer be supplied complete, but we have a limited number of copies of Nos. 2, 4, 5, and 6 which we offer at 30 cents each while they last.

*VOLUME II* (1900) complete, 148 pages..... \$1 00

*SUBSCRIPTION TO VOL. III* (1901)..... 1 00

*PACIFIC COAST AVIFAUNA NO. I:* "Birds of the Kotzebue Sound Region, Alaska," by Joseph Grinnell, one of the most valuable and interesting papers on boreal birds yet issued. 80 pp. and map..... 75  
(This publication will be sent on approval.)

ADDRESS ALL ORDERS TO

C. BARLOW, Editor and Business Manager,  
SANTA CLARA, CAL.

WANTED:—Copies of the Jan.-Feb. and May-June *CONDOR* for 1900. Those having extra copies please address the editor.





A FIELD IN CALIFORNIA.

We have pleasure in presenting an "informal" photograph of Prof. F. E. L. Beal of The Biological Survey, Washington, D. C., whose sojourn in California has thus been made a matter of record. Californians will be interested in a likeness of one of the authors of the numerous excellent food bulletins issued by the Department of Agriculture, while Prof. Beal's Eastern confreres may behold him bereft temporarily of official dignity and enjoying his field work in company with Mr. W. Otto Engren, son.

# THE CONDOR.

Bulletin of the Cooper Ornithological Club.

A BI-MONTHLY EXONENT OF CALIFORNIAN ORNITHOLOGY.

Vol. 3. No. 4.

Santa Clara, Cal., July-August, 1901.

\$1.00 a Year

## Breeding of *Hesperocichla naevia* in California.

WALTER K. FISHER, STANFORD UNIVERSITY, CAL.

THE WRITER spent the greater part of June 1899 at various points in the heavily forested redwood belt, from Humboldt Bay to Crescent City. This belt is comparatively narrow and occupies the low hills and valleys next to the coast. It is a region of dense, luxuriant vegetation, and is a humid division of the Canadian zone. It is not strange therefore that the varied thrush (*Hesperocichla naevia*) should be found breeding here. On June 11, 1899, while collecting in the still dark redwood forest along Lindsay Creek (perhaps five miles north of Vance, Mad River, Humboldt Co.) the writer was surprised suddenly by the outcries of two varied thrushes, which dashed at him from above, much after the fashion of hysterical robins. One of these birds (♀ No. 165248 U. S. Nat. Mus.) was promptly shot, but the male, whose bright colors rendered him conspicuous in the somber forest, slipped away at once. There can be little

doubt that the nest was close at hand, for the actions of the birds plainly betokened this. A more or less hasty search failed to reveal it, however, a fact not surprising at least to those who are familiar with the region.

Again on June 28 at the mouth of Redwood Creek, Humboldt Co. (in an air-line about 25 miles north of the previous locality) a male varied thrush was seen. This bird flew into a maple with its bill full of food, but the characteristic haste of a stage-driver rendered further investigation impossible.

The presence of such a bird breeding in this region only tends to emphasize the distinct boreal nature of the belt. In this same locality one finds, *Bonasa umbellus sabini*, *Columba fasciata*, *Colaptes cafer saturatior*, *Contopus borealis*, *Perisoreus obscurus*, *Melospiza melodia morphna*, *Anorthura hiemalis pacifica*, *Parus rufescens*, *Hylocichla ustulata*, *Hylocichla aonalaeschkei* and even other boreal forms.

### The Santa Cruz Song Sparrow, with Notes on the Salt Marsh Song Sparrow.

BY JOSEPH GRINNELL.

#### +*Melospiza melodia santaeccruis* new subspecies.

*Subsp. Char.*—Relationship apparently nearest to *Melospiza melodia cooperi*, from which it differs in smaller size, in much narrower and weaker bill, and in the greater extent and intensity of the brown markings.

*Type*—♂ ad., No. 4292, Coll. J. G.; San Francisquito Creek, near Palo Alto, California; June 2, 1900; collected by J. Grinnell.

*Coloration*—Feathers on top of the head with narrow sooty streaks, broadly edged with chestnut; narrow median crown-stripe drab gray; feathers of mantle, broadly streaked with sooty and latterly margined with hazel and clay color. Wing-coverts, secondaries and tail feathers broadly edged with bright hazel. Postocular and rictal stripes, chiefly hazel. Superciliary stripe, drab gray. Breast and sides narrowly and sparsely streaked with sooty, the streaks running forward into well-defined maxillary stripes; most of these blackish markings are bordered narrowly with bright hazel. Flanks and crissum clay color, streaked with sooty sepia. Rest of under parts pure white.

*Range*—Along the fresh-water streams heading in the Santa Cruz Mountain Region, from San Francisco south to Monterey Bay.

*Measurements*—The following are the average measurements in inches of all the adult skins available of the four southern coast races of *Melospiza melodia*.

Subspecies.	Locality.	Skins.	Wing.	Tail.	Culmen.	Depth of Bill	Skins.	Wing.	Tail.	Culmen.	Depth of Bill
<i>cooperi</i>	{ Pasadena and vicinity	15 ♂ ♂	2.47	2.81	.47	.28	6 ♀ ♀	2.33	2.64	.45	.27
<i>santaeccruis</i>	{ Fresh-water streams P. A.	17 ♂ ♂	2.41	2.66	.45	.25	11 ♀ ♀	2.31	2.58	.45	.25
<i>pusillula</i>	{ Salt marshes S.F. Bay near Palo Alto.	20 ♂ ♂	2.28	2.46	.44	.24	15 ♀ ♀	2.18	2.36	.43	.23
<i>samuelis</i>	{ Salt marshes St. Vincent, Marin Co.	3 ♂ ♂	2.28	2.50	.43	.23	2 ♀ ♀	2.15	2.37	.43	.23

*REMARKS*—This is another case serving to give the fauna of the Santa Cruz Mountain Region an insular complexion. The Song Sparrows from that vicinity have been variously referred to *samuelis* and *heermannii*, but upon comparison with either of these the distinctions are readily perceived. In the neighborhood of Palo Alto the habitats of *santaeccruis* and *pusillula* are immediately adjoining. San Francisquito Creek at its mouth forms a slightly elevated delta sloping away gently into the surrounding salt marsh. Santa Cruz Song Sparrows are abundant and constant residents from the source of this stream in the Sierra Morena, to the final limit of the willows at its mouth. At this latter point we have the interesting problem of two "subspecies" breeding literally within a stone's-throw of each other. I have in mind a particular area near the foot of the Embarcadero Road, where a salt slough, its banks matted with *Salicornia*, winds along a willow thicket. Here on May 11, and on several previous occasions throughout the year, I shot typical specimens of both *pusillula* and *santaeccruis* within a few yards of each other, but I have never found either one in the habitat of the other. The full-fledged young of both forms, which are as easily distinguishable as the adults, were secured in numbers, but those of *santaeccruis* always in the willows of the creek and the weed-patches adjoining, while those of *pusillula* invariably came from the *Salicornia* beds. Briefly, I have no evidence whatever that *pusillula* and *santaeccruis* interbreed. The latter, however, is obviously in geographical continuity with *cooperi* to the south, and probably with the still larger *heermannii* of the Sacramento-San Joaquin Basin. But what has been the derivation of the Salt Marsh Song Sparrow? I have no material whatever to show that either of the small marsh forms, *samuelis* and *pusillula*, intergrades with

*heermannii*. If geographical intergradation still exists between them, I should expect to trace it among the Song Sparrows occupying the brackish tide marshes where the San Joaquin and Sacramento Rivers flow into the head of San Francisco Bay. But such material is as yet inaccessible to me. Skins from the salt marshes on the north side of the Bay (St. Vincent, Marin Co.) agree exactly with Baird's description of *samuelis*. As the type locality, Petaluma, is within 5 miles of tide water, it seems reasonable to suppose that the type was a tide-land bird. So far, I have failed to learn of a yellow-bellied Song Sparrow being obtained on the north side of the Bay. We are, therefore, to suppose that the Bay forms a barrier between *samuelis* on the north and *pusillula* on the south. The yellowness of the under parts is the most striking character of *pusillula*, and the great majority of my specimens have this character well pronounced. But I have a few skins from the salt marshes near Palo Alto, taken along with yellow examples, which are scarcely or not at all yellow beneath. These closely resemble *samuelis*, but are not so broadly streaked with black dorsally, and the general tone is ashier. Such birds seem to me properly considered as individual variants of *pusillula*; for they are exactly like the more or less yellow examples in every other respect. It has been suggested that Baird's *gouldi* was one of these white-bellied varieties of *pusillula*. This might be decided by a comparison with the type. Some ♀♀ of *pusillula* have the wing 2.10, though this is rather below the average. Perhaps, in view of the above evidence, some would prefer to rank *pusillula* as a species; but its relationship seems to be best expressed by the trinomial.

I have no material from California north of Marin County. Scores of skins are needed from almost every valley in California before we can hope to properly classify the various local races of the Song Sparrow. Although so much alike, they appeal to one with all the more interest; for a study of two slightly differentiated races will certainly give us a clearer insight into the manner and causes of the evolution of species, than if we gave attention exclusively to the completely separated forms.

■ ■ ■ ■ ■

### Two Years With Mexican Birds. III. Some Plantation Birds.

BY E. H. SKINNER.

**G**RAY'S ROBIN (*Merula grayi*) during his stay in the vicinity of Tapachula is one of the commonest varieties. They are present in large numbers late in the winter and spring and almost entirely disappear in summer. The coffee plantations with a heavy undergrowth of coffee shaded by larger trees are the favorite resorts of these birds, very few being found in the deep woods or in pastures. In December a very few arrive and we are made aware of their presence by the lovely song which is occasionally heard, the Mexican Zen-zontli being famous for his minstrelsy.

By the middle of February the birds have all arrived, being scattered all

over the cafetal, but not going in flocks. Towards evening when the sun comes out after an afternoon shower everything is inexpressibly bright and fresh and the robins seem to appreciate it, for at such times I have heard as many as fifty birds singing as if their lives depended upon it. Besides their song they have a little whistle which is almost exactly like the last seven notes of the familiar air, 'You Can't Play in my Yard', and another gutteral note "chuck-chuck", which, by the way, is their Indian name.

The breeding season commences in April and continues into July. I have taken fresh eggs between April 20 and July 11. The nest is a coarse affair

made of roots, moss and mud, well packed together, and owing to the daily showers, a nest generally raises a good crop of grass and weeds around its edges. The nest is placed commonly in coffee bushes, bunches of bananas or any low shrub at from eight to twelve feet from the ground. The extremes which I noted were two and twenty feet respectively. There were as many as 50 nests in the 80 acres surrounding the house. When the young are just beginning to fly the native small boy goes out and captures the little fellows by the dozen, using them to make bird stew. Gray's Robin lays two or three eggs, and although I have examined hundreds of nests I have never found four. There is great variation in size, shape and markings but an average egg resembles those of our Black-headed Grosbeak.

The Black-headed Saltator (*Saltator atriceps*) is a representative bird of Chiapas and is found mostly in flocks in the wooded portion of the lowlands and foothills, flitting about in the bushes and tree-tops chattering harshly all the time. The nest is loosely constructed of twigs and leaves and two eggs are always laid, being blue with heavy black markings at the larger end, similar to the eggs of the Redwinged Blackbird. The nesting season extends from the latter part of April to the latter part of July.

*Synallaxis erythrorhox* is a great deal like a little wren with nothing much to distinguish him but his nesting habits, but here he rivals anything in the feathered kingdom. The nest is usually placed from four to ten feet up in dense bushes and is composed of dry twigs four or five inches long. The bird makes a pile of these sticks a foot in diameter leaving a cavity of three or four inches diameter inside. After this is done a horizontal tunnel two inches in diameter is made, leading away from the nest. At about a foot from the nest at the end of the tunnel another pile of twigs is constructed through

which the tunnel turns upward for a few inches. This is the opening of the nest upon which the male roosts while the female is setting. The inner cavity is lined with leaves and three light blue eggs, rarely two, are laid.

I found the Grove-billed Ani (*Crotophaga sulcirostris*) rather common, nesting according to Davie as good birds should. I found sets varying from four to ten eggs and was told by Indians that 20 eggs were sometimes found in a nest, from which it appears that this species has the same habit as *C. ani* of several birds using the same nest. I found one nest of *C. sulcirostris* built on the top of a nest of Giraud's Flycatcher.

The Central American House Wren (*Troglodytes intermedius*) seemed like an old friend to me, flitting about and singing like our wrens at home. They reared their young in dark holes under the rafters of the house and barn and in the hollow trunks of trees. I found one nest in a hollow stump on the ground. The bird lays but three or four eggs, which are lighter than those of our common house wren. This little fellow and the Turkey Vulture were seemingly the only old friends I had in Mexico.

#### Scott's Oriole at San Diego, Cal.

**S**COTT'S ORIOLE (*Icterus parisorum*) is not rare on the desert slope of the mountains in San Diego County in the migration, but it is very seldom seen between the mountains and the sea here. I saw two males in April, one of these being in the eucalyptus grove in the city park of San Diego. The song of this male was peculiar in some ways, so I followed him around to make sure of the identification. Last Sunday (June 2) I heard the same song in another part of the grove, a few hundred yards from where I saw the bird in April. This would indicate that he had become a summer resident here and probably had a mate. I know of no breeding record of this species in the coast region of San Diego County.

*San Diego, Cal.* FRANK STEPHENS.

### An Exceptional Set of Eggs of the Wood Duck.

ONE of the prettiest spots in San Joaquin County is located in the extreme north-west portion of the county and is known as "Forest Lake." Previous to last year I had never visited the lake and as the name seemed to suggest a likely place for birds, I inquired of the farmers living in the vicinity as to the prospects of finding ducks breeding there and was informed by all that this was a favorite haunt of the Wood Duck. (*Aix sponsa*.)

I therefore determined on a trip to the place and April 29, 1900, in company with my brother and a friend, we started from Lodi on our wheels about 5.30 A. M. and reached the lake about 8.30 A. M. Dismounting we immediately strapped on our baskets, arranged the other necessary collecting apparatus and started along the north side of the lake, keeping a sharp lookout for any suggestion of a nest.

We had not proceeded far before a male Wood Duck arose from the water's edge and beat a hasty retreat. Thinking that his nest might be in the vicinity we began a thorough search and were soon rewarded by finding the nest located in a deserted home of a Red-shafted Flicker and placed about twenty-five feet up in a white oak tree. The tree was quite large but after a difficult climb my brother reached the opening and inserting his hand drew the female bird from the nest. He informed us that the nest was full of eggs, which fact was made very evident after he had taken out twenty-one eggs and landed them safely on *terra firma*.

The number of eggs in the set led me to believe that the nest was occupied by two pairs of birds, but after a thorough search of the lake I failed to find but one pair, notwithstanding the fact that I had been informed that the birds were quite numerous in the locality. However I was well pleased with my

prize and after taking several sets of Swainson's Hawk (*Buteo swainsoni*) started homeward.

I now have the eggs before me and my belief in the double occupancy of the nest is made stronger by the fact that nine of the twenty-one eggs are somewhat darker in color than the remaining twelve and are also, as a whole, slightly larger, as the following measurements will show 2.06x1.50: 2.12x1.50: 1.93x1.56: 1.93x1.50: 1.93x1.50: 2.06x1.50: 2.03x1.47: 2.00x1.56: 2.00x1.56: 1.87x1.43: 1.93x1.47: 2.00x1.50: 1.93x1.47: 2.00x1.47: 2.00x1.50: 1.93x1.50: 2.00x1.50: 1.93x1.50: 1.93x1.47: and 1.93x1.43. Taken in their order, the first nine measurements are those of the dark colored eggs while the remaining twelve are of the light color.

Incubation had already commenced in four of the dark colored eggs and in six of the light color, thus showing that they must have been laid by the same bird or by two birds occupying the nest at the same time. Had incubation been more advanced in one color than in the other, I would have been led to believe that the pair of birds found in possession of the nest must have driven the first pair away and continued adding to the number of eggs already in the nest, but the state of incubation in the two colors has shown that such could not be the case.

After considering all the points in favor of the theory of two pair of birds occupying the nest at the same time, it seems to me that they are stronger than those in favor of one pair of birds, as the best point for the latter theory is the lack of another pair of birds in the vicinity, while the number of eggs in the set and the difference in color and size are certainly good points in favor of the former.

This is the first instance I have had brought to my notice of a decided difference in color and size of a large set of eggs of the Wood Duck and may only be in this case a freak set. However I would like to hear further notes on this subject from other members of the Cooper Club.

Stockton, Cal. WALTER B. SAMPSON.

**A New Species of *Geospiza* Collected by the Hopkins-Stanford Expedition to the Galapagos Islands.**

BY ROBERT E. SNODGRASS AND EDMUND HELLER.

**+ *Geospiza heliobates*, new species.**

*Type*.—Adult male, No. 4186, Leland Stanford Junior University Museum; Mangrove swamp at Tagus Cove, Albemarle Island, Galapagos Archipelago, June 24, 1899.

*Range*.—Mangrove swamps of Albemarle and Narborough Islands, Galapagos Archipelago.

*Specific characters*.—Very similar to *Geospiza pallida*, resembling it in coloration, but having a smaller bill—the culmen being 16 mm. or less in length while in *G. pallida* it is 17 mm. or more in length.

*Description of the type*.—Above dark brown with an olive tinge on the rump, all of the feathers of the dorsum with narrow pale olive-grayish edgings. Wing and tail feathers lighter, more smoky-brown. Lores, sides of head and underparts dirty buffy-gray, brownish-buff on the sides and flanks. Lores spotted with brown. Feathers of the breast and sides with dark brown central areas forming spots of the same color. Tips of the greater and the middle wing-coverts rather indistinctly brownish-rufous, forming two inconspicuous cross bands. Under wing-coverts grayish; under tail coverts brownish-buff with pale grayish edgings. Under surface of wing and tail feathers grayish brown. Bill black. Feet dark brown. Length 123 mm., wing 72, tail 48.5, culmen 16, gony 8, width of bill at base 6.5, depth of bill at base 9, tarsus 21.5.

*Adult female*.—Female specimens having the plumage very much worn are almost identical in coloration with the males, but generally have fewer and smaller spots below. Above the plumage is blackish on the head, almost pure olive-brown on the back, with the central areas of the feathers darker. Wing and tail feathers dark brown with olive-buffy edgings.

This species inhabits exclusively the mangrove swamps of Albemarle and Narborough Islands of the Galapagos Archipelago, being found in the swamps all along the east shore of Narborough, and in the swamps on Albemarle at Tagus Cove, Elizabeth Bay and Villa Mil.

We have fourteen adult males, twelve adult females, two immature males and six immature females taken in January, February, March, April and June, 1899.

MEASUREMENTS OF *Geospiza heliobates*.

L. S. J. Univ. Mus. No.	Locality.	Sex.	Length.	Wing.	Tail.	Culmen.	Gony.	Width of bill at base.	Depth of bill at base.	Maxilla from nostril.	Tarsus.
4186	Albemarle Id.	♂	123	72.	48.5	16.	8.	6.5	9.	10.3	21.5
4161	" "	♂	126	70.	48.5	16.	8.	7.	8.	11.	21.5
4226	" "	♂	133	71.5	45.	15.5	8.5	6.5	8.	10.5	23.5
4266	" "	♂	127	69.	39.	16.	8.	6.5	8.	10.5	21.5
4177	" "	♂	112	70.	42.	14.5	8-	6.7	7.7	10.	21.
4213	" "	♂	142	70.	42.5	16.5	8.7	6.7	8.	11.	21.7
4213	" "	♂	136	68.	41.5	15.	8.5	6.	7.5	10.	21.
4242	" "	♂	120	70.	45.	16.	8.5	7.	8.7	10.	22.

**An Outing for Owls' Eggs.**

BY PROF. P. M. SILLWAY, LEWISTON, MONT.

WITH the genuine egg-crank, the first oological excursion of the season is a red-letter day, provided that it results in tangible additions to one's cabinet. As I glance at the seven eggs of the Western Horned Owl (*Bubo virginianus subarcticus*) reposing

in their downy trays as the first fruits of another oological season, I note the 16th of March, 1901, as one that will be readily recalled among an egg-crank's reminiscences. True, sets of the Western Horned Owl are neither especially rare nor difficult to secure, but when

Saturday is the only available day and magnificent distances must be traversed in this region to cover the ground, two sets of this species may represent a fair day's work. I am disposed to make the statement even stronger, for the following Saturday was spent in a fruitless tramp up one "coulee" and down another, a gentle blizzard prevailing most of the time; and upon my return, worn and weary, I passed most of the following evening reading about the taking of Horned Owl's eggs and congratulating myself that the excursion of the previous Saturday had resulted so satisfactorily.

Early in the morning of March 16, we set out for a drive along the creek which hurries through our home town, forming a narrow bottom, set here and there with cottonwoods overtopping the haw and willow thickets. Most of the hawk's nests along our route were well-known to me, and this fact presented a well defined method of procedure,—the inspection of all the old nests within reach that day. Owing to the heavy condition of the roads and other hindering circumstances, about eleven o'clock we found ourselves not more than ten miles from home, but near a promising grove containing a nest that formed a huge black spot among the naked branches of the cottonwood clump. We approached the place with that indefinable feeling known only to the egg-crank when he is nearing what may be a good thing but is yet of doubtful outcome, anticipation crowding to the front only to be met by the ghost of disappointment. But see! there on the rim of the nest stands the lord of the household, and above the dark outline of the stucture projects the tell tale tufts of the sitting house-wife. A moment later we can see her eyes staring upon us with angry defiance, and her plumicorns flutter in the wind as she raises her head to glare upon the intruders of the wildwood premises. Alarmed at the invasion, the male drops downward and flaps down the

creek, and in another moment the female deserts her home and flies across the stream to another grove, leaving us master of the situation.

The nest was in a triple crotch in the main part of the tree, which was a medium-sized cottonwood (medium-sized for Montana, not Illinois), the lower half of which was thickly grown with sprouts and deadened branches. One of the boys ascended to the nest, while I occupied the anxious seat and gave sundry directions to the climber. In a short time he drew himself up over the nest and shouted, "Four eggs, bigger than hen-eggs." Giving him repeated suggestions regarding the packing and lowering of the eggs, I danced around upon the ground below, until presently I reached up and grasped the lard pail containing the treasures. Ah, what relief when the spoils were placed safely beside the lunch basket, and the notes hastily jotted in my tablet! A chip was knotted into the chalk-line at the brim of the nest, and when measured with a five foot tape line showed a height of thirty-two feet nine inches from the ground. The nest was one of last season's use by either Swainson's Hawk or the Ferruginous Rough-leg, and had been prepared by a scant supply of downy feathers, probably furnished by the present occupants of the nest.

The next objective point was a nest about three miles back toward home. Having eaten our lunch, we turned and followed the water course until we reached the second nest, which like the first was a conspicuous mark, being in a lone cottonwood leaning directly over the water. Riding forward with the mad gallop common to Montana cowboys, the boys returned and announced, "She's on there all right. Them horns give her away." Sure enough, there sat the angered mistress of the Bubo mansion, with head reared to face the unusual visitors. This Mrs. Bubo required more demonstration to cause her to desert her home, but when the climber began to scratch among the

lower branches she dropped down behind the trunk and flew to cover up the creek.

This nest was made in a crotch of an oblique part of the tree, somewhat separated from the main portion, furnishing a most exposed site. The nest in the preceding season had been lined with bark and binder twine, most of which yet remained. A few downy owl's feathers had been added to make the structure habitable, and there the climber found three eggs. As there was water below the nest I had to jump a portion of the stream to receive the eggs; and as usual in such instances, my elation at finding the products of this second Bubo overcame my ordinary caution and I landed one foot plump into the freezing water. The second set was soon placed in safety, however; the height of the nest was thirty-eight feet from the water. It is interesting to note that during all the proceedings incident to our spoilation of this nest, the head of the family sat quietly in an adjacent thicket, and was not observed until we were about to leave the place.

The eggs of the first set varied in incubation from fresh to abundance of blood. Two of them had been clawed by the heavy feet of the sitting bird, but the claw mark of one came in such position, being about the middle of one side, that it could be used for the drill hole. The other showed three claw perforations, and only one of them could be hidden by the drill. The eggs of the second set were fairly fresh, one showing some blood. It is evident that setting or incubation begins with the laying of the first egg.

This paper should properly end here, but the peculiar part of the record is yet to come. Of course I visited all the old nests along the creek bottom until I reached home, but found no more owl's nests. It is needless to look for hollow trees in these bottoms, for none of the trees grow large enough to have a cavity that will contain a Horned Owl crosswise. The foregoing applies merely

to the cottonwoods and aspens of the creeks, not the pines of the mountains. But this is not the peculiar thing I meant to mention,

Upon our arrival at home, my wife with proper curiosity desired to see the products of the day's outing. Having learnedly told her on previous occasions that owl's eggs are always white, I unpacked the two sets and spread them out before her.

"Why, I thought you said they were white," she exclaimed.

"They are," I averred. "Don't you call that white?"

"Of course not," she replied, with a smile at my apparent ignorance of colors "Can't you see that they are green?"

And sure enough, Mr. Editor, those eggs of the Western Horned Owl have a decided greenish tinge. They are really not white at all.



#### The Bullock's and Arizona Hooded Orioles.

BY J. F. ILLINGWORTH, PALO ALTO, CAL.

OF ALL the birds that visit Southern California in the spring the orioles are certainly the most interesting. Every bird lover knows what a thrill of pleasure passes through him as he notes the first return from the south. Usually the Bullock's Oriole (*Icterus bullocki*) arrives in Los Angeles Co. several weeks before the Arizona Hooded Oriole (*Icterus cucullatus nelsoni*). From my migration notes for the last four years Bullock's arrived March 19 to April 10 and the Arizona Hooded from April 4 to May 1, but usually the latter came late in April. The males of both varieties precede their mates by about two weeks, and the nest is commenced shortly after the arrival of the females. The adult Bullock's Orioles generally give theirs a firm support between two or more small branches, or place it in a crotch so as to lessen the danger from the winds. It is interesting to note that the young birds are much less skillful

in nest building than the adults. The materials used are not only different but the nest is quite often swung loosely to the twigs above, so that it is at the mercy of every wind. The material used by the young birds for the construction of the nest is mostly coarse vegetable fibre and they seldom line their first home. The older birds, however, discover that twine, horse-hair etc. make a much stronger and neater wall for their home and also that fluffy chicken feathers and bits of cotton batting are excellent lining. They are quite expert in concealing their nest by bringing down green leaves and tying them about the outside. This is so well done that to a casual observer it would appear only as a thick bunch of foliage. The older birds often do most excellent weaving and I have taken one nest composed entirely of horsehair, the sides being as smooth as a piece of camel's-hair goods. This nest is heart-shaped and has a circular opening at one side of the top, which has a diameter of only 1.65 inches, hardly large enough to admit the birds. The nest is four inches deep and four inches across inside, and is lined with soft chicken feathers and cotton batting. The quills of the feathers are pushed through the sides of the nest so that they will keep their places.

Until the season of '97 I have never known the Bullock's Oriole to use palm-fiber in the construction of its home, but I found a nest May 11, 1897 in a peach tree, composed entirely of this fiber. It was well lined with chicken feathers and placed between several small branches. A pair of Bullock's Orioles built a nest this year in an almond tree near the porch, and I had an excellent opportunity to watch them while they were at work. The place chosen was in a wide fork between four small branches. Both birds worked on the nest and as soon as they had loosely formed the walls or framework, one of them worked inside and the other outside. The latter would

bring a horse-hair or a piece of twine in its beak and pass the end through the wall of the nest to his mate inside who took the end and passed it out again through another place. In this way the nest was soon woven quite smooth and looked as if it had been made with a darning needle by hand. This nest is very peculiar in shape, the sides being woven to the surrounding twigs which makes the opening at the top very large and causes the nest to look like a double one. The opening is six inches long and three inches wide and the nest is five inches deep inside. It is difficult to find two nests of the Bullocks' Oriole alike in shape or material, as they use almost anything they can find in the way of fiber.

The nests of the Arizona Hooded Oriole on the other hand are very much alike, and I have never found one made of other material than the palm-fiber. The locations, too, are similar, a tree with large leaves being usually selected and a favorite position is under the broad, corrugated leaves of the palm. These form an excellent shelter from both rain and sun. They drill holes through the thick leaves with their sharp, slender beaks and tie the nest to them with palm-fiber. Often the nest is hung between several leaves such as those of the fig tree, when holes are cut and the palm-fibers laced in and out through them, thus drawing the leaves together to form the outside of the nest. The leaves not only aid in the nest structure but also form the best possible concealment.

An average nest of Arizona Hooded Oriole is 3.50 inches deep and 2.50 inches wide inside measurements, while the outside is about four inches deep and four across. Nests of both the Bullock's and Arizona Hooded Orioles are frequently taken possession of by House Finches, sometimes even before the orioles have finished them, but more often after they are deserted. When the House Finches take possession of the nest they re-line it with

their own characteristic building material.

The orioles are very beneficial to the horticulturist, although they eat some early fruit such as berries, cherries etc., but no fruit man will begrudge them these if he thoroughly understands their habits. The chief food of the orioles consists of insects and injurious caterpillars, and I have often watched

them while they were searching among the branches for this latter food. They are particularly fond of a small green caterpillar that destroyed the foliage of the prune trees a few years ago. The orioles are often seen in the berry patches but they are usually in search of insects as is proven by the examination of a great number of stomachs.



#### Notes on Some Little-known Birds of Southern California.

BY EDMUND HELLER.

##### *Columbus auritus.* Horned Grebe.

A few were seen on a small lake near Riverside in the winter of 1893. One of these was secured. None have been observed there since.

##### *Sterna forsteri.* Forster Tern.

Found common at Elsinore Lake, June 2, 1896. Said to breed by a local collector.

##### *Hydrochelidon nigra surinamensis.* Black Tern.

Observed at Elsinore Lake, June 2, 1896. Less common than the Forster Tern, but also said to breed.

##### *Steganopus tricolor.* Wilson Phalarope.

One specimen obtained at Riverside in the winter of 1891.

##### *Totanus flavipes.* Yellow-legs.

Noted twice at Riverside during the fall migration.

##### *Totanus melanoleucus.* Greater Yellow-legs.

A common migrant at Riverside.

##### *Lophortyx gambeli.* Gambel Partridge.

Found fairly common in May, 1896, at Warren's Wells, a small station on the Mojave Desert at the south-eastern base of the San Bernardino Mountains.

##### *Melopelia leucoptera.* White-winged Dove.

While at Warren's Wells the miners told me of a white-winged dove which occurred at Twenty-nine Palms, a station some thirty miles farther east. From their description I judged it to be this species. If correct future exploration should prove its presence, which would make an addition to the list of California birds.

##### *Haliaeetus leucocephalus.* Bald Eagle.

I was assured by a local collector, that a pair of Bald Eagles had nested for a number of years near Elsinore Lake.

##### *Dryobates scalaris bairdi.* Texas Woodpecker.

Several collected at Warren's Wells on the Mojave Desert in May, 1896.

##### *Dryobates scalaris lucasanus.* Saint Lucas Woodpecker.

Found common at Whitewater at the head of the Colorado Desert in May, 1896. One secured at Riverside in April, 1895.

##### + *Harporhynchus bendirei.* Bendire Thrasher.

Found fairly common in May, 1896, at Warren's Wells, where this species was more numerous than *H. lecontei*, which also occurred. Specimens were secured.

### Two Amusing Incidents.

ON SATURDAY February 22, 1896 occurred the first of what I have denominated "two amusing incidents." It relates to an experience that I had, on that date, with an Anna's Hummingbird (*Calypte anna*). I happened to be collecting in a large dense grove of eucalyptus trees in this county, and in one of these I discovered a nest of the above species. On my shaking the tree the female flew off from the nest, which was placed on a very thin limb and about fifteen feet from the ground. The main trunk of the tree was so thin and frail that I was compelled to climb another and stronger tree that grew some fourteen feet away, in the direction in which the horizontal limb pointed. I ascended this latter tree until I was on an even height with the nest and, reaching out with my right hand, I pulled the branch on which it was placed to me, and grasped the end thereof with my left hand. The female had alighted on the nest while I was climbing and still remained thereon. I shook the branch vigorously but the bird, undismayed, paid no attention whatever to me until I placed my hand within two or three inches of her, when she snapped at me ferociously several times. It was not until I had actually taken hold of the mandibles and lifted the bird from the nest that I was able to discover two fresh eggs therein.

But this is not all: while I was removing the eggs the hummer kept buzzing and darting around in close proximity to my head. After the eggs had been taken from the nest the female immediately flew back onto it and was determined to stay there. Being desirous of procuring the nest, I reached over the bird and severed the limb between the nest and the trunk. In my doing this the nest became completely inverted but still the persistent little hummer clung to it, and when I dropped the detached limb the bird re-

mained on the nest, which was still in this inverted position, for fully ten feet of the fall, when she finally released herself and flew off. I have had considerable experience with hummers and have often noted the bravery of these birds, especially Anna's, but I must confess that this was the bravest and most persistent one with which I ever met.

My second topic relates to an experience of mine with a California Screech Owl (*Megascops asio bendirei*). Under date of May 9, 1897, my note book reads as follows; "An amusing incident occurred during my trip today. I discovered a natural cavity in an old oak stump, which I considered would be a fitting receptacle for a set of Screech Owl's eggs. Walking up to the stump I projected a stick into the hole about two feet, when a female Screech Owl flew out and disappeared through the trees. I soon became aware that the stump was occupied in the upper story by a colony—and a large and warlike one it was—of honey bees, one of the beasts trying his best to alight on the end of my nose and place a wart thereon. This meant that I must retreat to safer quarters. I was convinced that the cavity contained either eggs or young and was reluctant to leave without ascertaining what the contents were. But the bees were so thick and wild that I determined to wait until my return homeward in the evening by which time I supposed that the bees would be inside and would not bother me. We continued on our journey and had not proceeded one hundred feet from the stump, when we observed Mrs. Owl perched on a dead oak limb in a dazed condition—asleep I suppose. One of the boys who was with me took hold of the bird and she then barely opened her eyes and lay perfectly numb in his hands. Two bees were found on the mandible evidently trying to sting her. One of her eyes was badly blood-shot and she was apparently a very sick owl. She remained entirely senseless in the hand

until we placed her on another limb and continued on our way. We returned over the same course some five hours later and imagine our surprise when, on reaching the last mentioned place, the first thing that met our gaze was the remnants of a perfectly fresh Screech Owl's egg. This egg lay broken on the ground directly beneath the spot where we had last placed the bird. The broken shell was soft and pliable and was all coiled up. The white and yolk were of a very thin and watery nature. I found the owl a few feet away on the ground, among some thick shrub roots. She was in the same numb, senseless condition, and I took her in my hand and placed her again in the cavity, where she immediately became very active.

In my opinion, there are two ways of

solving this problem, if such I may call it. Either the owl was in such a sleepy, insensible state that she dropped the egg in the ordinary course of laying, supposing she was on the nest, or she was so overcome by fright or pain that she was compelled to drop it. The former seems the more plausible theory.

This incident may serve to open up the question as to whether a female bird has, under any circumstances or conditions, any control whatever over the laying of her eggs, or whether, when the time comes, no matter where she finds herself, she must then and there deposit them. I think that it would be a very interesting question to discuss.

A. I. MCCORMICK,  
Bakersfield, Cal.



Photo from life by Mr. J. G. Dudley.

**HARPY EAGLE. (*Thrasaetus harpyia*)**

We are indebted to Mr. A. B. Baker of the National Zoological Park, Washington, D. C., for the photograph of this interesting eagle. Mr. Baker informs us that "the bird was presented by the Governor of the State of Amazonas, Brazil, to Commander C. C. Todd of the U. S. S. Wilmington for the National Zoological Park. It has been at the Park for two years and is still apparently in perfect health."

### A Study of the Birds of Santiago Canyon.

MOLLIE BRYAN, ORANGE, CALIFORNIA.

#### *Concluded.*

I RETURN to the shade of the oaks and the hammock, and the scene is changed. The woodpecker and bluejay are busy stealing from the kettle of mush as it cools on the stove for the pack of fox hounds. The Lark Sparrow comes quietly into the basin under the vines for water. The Spurred Towhee is scratching among the leaves with its accustomed vigor. The California Thrasher comes at the call of "huita, huita" for its share of mush or bread crumbs, and lingers to dig with its long sickle-shaped bill, among the flower beds. A bluejay cocks up one eye and comes to see what is in the hole, driving the thrasher away and digging in exact imitation of it. The day goes out with the sweet vesper song of the Lark Sparrow and the soft call of the Poor-will.

When October days have come the roadsides are bordered with the scarlet zanschneria, the yellow threads of the dodder are in a wild tangle over sumach and sages, the cliffs are gorgeous with brightening lichens and sycamore trees are turning to brown and gold. The Meadowlark whistles from the mesa, the Vesper Sparrow is in the dry washes by the roadside, and flocks of Horned Larks are feeding in the fields. The Mountain Bluebird flashes across the way like a bit of fallen sky, and the Roadrunner passes swiftly from our sight, as we drive on our way.

Let us, now, take another glimpse at our bird paradise. The White and Golden-crowned Sparrows and Audubon's Warbler have taken possession. The Wren-tit still rings out its clarion notes, the bluejay is as mischievous as before and the woodpecker is studying a piece of water-pipe left on the fence to see if it is a suitable place in which to store acorns. Life under the arbor is now something to be dreamed of. Tom, the Plain Titmouse, comes for the

melon seed he has learned to love, and that are scattered regularly for him. When gathered around the hospitable board, and with mountain appetites we pass our plates for a second helping, and are told "Wait till Tom gets his seed." Plates are held, forks suspended in the air while 'Tom' hops in between the chairs for his seed, then all breathe and eat again. We are up at five to catch the Lark Sparrow at his morning song. And we see that one by one, the ravens come from somewhere out from the face of the cliff across the canyon. What music in their harsh "caw, caw" to bird-crack ears, for it is a promise of days to come, when from a point of vantage gained by hard climbing, we will sit and spy on the family affairs of at least two households of ravens, one on a ledge of a cliff, the other in a tree hard by.

The hills about us echo with the call of the Valley Quail, for they have learned that only about here are they safe from the huntsman's gun. The robins and Western Bluebirds have come and are feeding on the California holly and mistletoe berries. A visit to the tank brings us face to face with other of our winter visitors. The Hermit Thrush is twitching wings and tail from every bush, and a flock of Townsend's Sparrows are chattering socially over not a cup of tea,—but a limpid pool of water. A number of Wren-Tits come to examine their visitor. One comes within two feet of my face, and finding me harmless, descends, twig by twig, to the pool below for a bath. It hops from a small overhanging bush above the water, daintily dips one toe in, and darts up in alarm. The second time it wet both feet before nervously flying up again. The third time it stepped in and gave a flutter with its wings, when back to shelter it went. It continued these vain attempts at a bath until the seventh, when it took a

thorough washing and I thought "like Naaman, it must dip seven times." But no. It returned again and again until at the fifteenth it considered itself completely cleansed. Then the long, elaborate toilet had to be made.

On slowly descending through the crack in our broken bowl, I discovered a flock of Plumed Quail dusting in the dry earth below me. One was walking about, plume erect, keeping guard while the others enjoyed *their* bath. What beautiful birds, and how seldom we see them so low in the mountains, but here at the foot of Santiago Peak they over-lap the range of the Valley Quail. The Canyon Wren is again peering among the rocks for its dinner, and the bushes are alive with other feathered forms. But it is the season when arbor days are past and four walls must be endured, that bird pans are placed before the window and a

feed board spread with corn meal, brings all the members of the sparrow family. Townsends, the Gambel's and Golden-crowned Sparrows, California and Spurred Towhees and juncos are all here. The first rain brought a pair of Varied Thrushes. In the midst of the downpour the male was seen taking a bath in a pool near the house.

In December come flocks of Band-tailed Pigeons and juncos are more plentiful. But this, like Tennyson's song of the brook, might go on forever. But the winter sun *will* set and the Gambel's and Golden-crowned Sparrows open their evening concert. The Valley Quail come whirring into the trees above the arbor for a safe retreat, and the night is ushered in by the clear sweet warble of the Lark Sparrow, that in the quiet spot seems to add a benediction to these days of bird study.

■ ■ ■ ■ ■

### Echoes From the Field.

**Western Evening Grosbeak Again.** On April 29 at Angwin's Hotel near Saint Helena, Cal. I saw a flock of about thirty Western Evening Grosbeaks (*Coccothraustes v. montanus*.) They were observed the day following also. A Cassin's Vireo had built a nest in a walnut tree in front of the hotel. On April 20 I found a nest of the White-tailed Kite containing four eggs, incubation advanced. The nest was situated in a small live oak tree in a marsh, fourteen feet up.

F. C. CLARK, Napa, Cal.

**Early Nesting of the Red-bellied Hawk.** On March 22, 1901 I took a set of three finely-marked eggs of *Buteo lineatus elegans* from a nest in a blue-gum tree at 43 feet elevation. A set of two eggs had been taken from the same nest last year on April 15. The nest was made of small sticks and lined with willow twigs to which were attached the green leaves and blossoms. The nest also contained a few feathers from the parent bird. This, I believe is a very early nesting date for this species.

NELSON CARPENTER, Escondido, Cal.

**Parasites in Birds.** Judging from my experience, the Valley Partridge (*Lophortyx californicus vallicola*) is singularly free from parasites. I have taken the entrails from at least ten thousand of these birds which I have shot in many parts of California and Lower California without finding a worm of any kind in them. Hawks, owls and fish-eating birds are seldom free from worms. Of the latter the terns of the coast are more likely to be free from them than most other water birds, many of which are killed by worms, especially the Brown Pelican (*P. californicus*.) When preparing specimens I have often admired the wise discrimination of Moses in specifying the things that are clean and those that are unclean, though I could not see the necessity of prohibiting the eating of that which

died, nor why the Jew was authorized to sell the same to the stranger who was within his gates.

L. BELDING, Stockton, Cal.

**Curious Nest of Anna's Hummingbird.** On Feb. 23 I collected a nest of Anna's Hummingbird (*Calypte anna*) 60 feet up in the very top of a tall gum tree. The hummingbird had used one side of an old goldfinch's nest, and there she had a soft nest of feathers. This bird evidently had an eye for business, as the goldfinch's nest, cosy in itself only required a little lining. Unfortunately the one egg which the nest contained was broken in getting it down; the nest I regard as a "freak," as I have never heard of a hummingbird using any old nest except its own.

On April 5 a friend brought me two eggs of the Killdeer (*Egialitis vocifera*) taken in the middle of a railroad track, directly between the ties. This track is the main one on the Santa Fe between Santa Monica and Los Angeles and at this place runs through the Ballona swamp.

W. LEE CHAMBERS, Santa Monica, Cal.

**Breeding of the Western Robin in Lake Co., Cal.** From time to time I have been informed that the Western Robin (*Merula m. propinqua*) nested in Lake Co., at about the same elevation as Clear Lake, which is between 1400 and 1500 feet. I have long been anxious to verify this statement but until June 12 of this year had been unable to do so. On that date I was walking in the lower foothills when an old robin with food in its bill flew past me into a white-oak tree, when observing me, it began to screech most vociferously. Looking the tree over carefully I discovered a nearly fully-fledged young bird sitting upon one of the branches, and further search in near-by trees revealed another young robin. Neither flew well or willingly and were apparently not long out of the nest. Since the beginning of May I have noticed four distinct pairs of Western Robins; one pair on the ranch here whose two young I observed; another pair on the road to Upper Lake, whilst the two remaining pairs have frequented an orchard at Upper Lake. I have had the pleasure every Saturday since early in May of seeing one or more birds there, but have failed to discover a nest or other sign of their having bred.

A. W. JOHNSON, Upper Lake, Cal.

**Notes on the Loon, Evening Grosbeak and Broad-tailed Hummingbird.** While at the Hatchery on Battle Creek, California, in the fall of 1898, I secured a loon which came ashore entangled in the salmon seine. The specimen was taken alive and uninjured. Similar catches have been reported previously from the eastern United States. Dr. C. W. Richmond, who kindly identified the bird, pronounced it *Gavia imber*.

On February 24, 1901, Mr. Walter E. Bryant secured two specimens of *Coccothraustes v. montanus* at Santa Rosa, Cal., and tells me there were several others in the trees near his house.

Some time ago (*Auk*, XIV p. 91) I recorded the Broad-tailed Hummingbird (*Selasphorus platycercus*) from Oakland. While the record was correct, it had been reported previously for the state. Dr. J. G. Cooper took a female at Lake Tahoe many years ago (*Proc. Cal. Acad. Sci.* 1st ser, IV, p. 7). It is also reported from the Sequoia National Park and as common on the western slope of the Sierra Nevada in California opposite the head of Owen's River (*N. A. Fauna*, No. 7, p. 59).

R. C. McGREGOR U. S. S. Pathfinder.



CHAS. W. BOWLES of Waldo, Oregon, writes of taking four sets of Black-throated Gray Warbler's eggs and a set  $\frac{1}{3}$  Pileated Woodpecker, thus confirming the suspicion that the Northwest is the oologist's paradise.

## PACIFIC COAST CHANGES IN THE CHECK-LIST.

The tenth supplement to the A. O. U. Check-List contains additions of especial interest to Coast workers. These were acted upon at the recent session of the A. O. U. Committee on Nomenclature, and a list of the accepted forms occurring on the Pacific Coast is here given.

*Ardea herodias fuscini* CHAPMAN, Northwest Coast Heron, Queen Charlotte Ids. and coast region of British Columbia; *Canachites canadensis osgoodi* BISHOP, Alaska Spruce Grouse, Upper Yukon region and thence northwest to Prince William Sound and Cook Inlet; *Lagopus leucurus altipetens* OSGOOD, Southern White-tailed Ptarmigan, Southern Rocky Mts., (Colorado, New Mexico etc.); *Empidonax insulicola* OBERHOLSER, Santa Barbara Flycatcher, Santa Barbara Ids., Cal.; *Perisoreus obscurus griseus* RIDGW., Gray Jay, British Columbia, Washington, Oregon and northern California east of the Coast and Cascade Ranges; *Ammodramus rostratus halophilus* (MCGREGOR), Lagoon Sparrow, Salt marshes in the vicinity of Abreojos Point, Lower California; *Pipilo maculatus atratus* RIDGW., San Diego Towhee, Southern coast district of California, south of San Fernando and Sierra San Gabriel, and south to Lower California; *Pipilo fuscus carolinensis* MCGREGOR, Northern Brown Towhee, Northwestern California; *Dendroica nigrifrons* BREWSTER, Black-fronted Warbler, Sierra Madre of Chihuahua, Mexico north to the Huachuca and Chiricahua Mts., Arizona; *Geothlypis trichas arizella* OBERH. Pacific Coast region, from Southern British Columbia to northern Lower California, west of the Cascades and Sierra Nevadas; *Thryomanes bewickii charienturus* OBERH., Coast region of Southern California north to about Pasadena; Santa Catalina Island; *Thryomanes bewickii calophonus* OBERH., Pacific slope, from Oregon to southern Vancouver Island and valley of Fraser River, British Columbia; *Anorthura hemimelaena helleri* OSGOOD, Kadiak Winter Wren, Kadiak Island Alaska; *Anorthura melanura* OBERH., Aleutian Wren, The westernmost islands of the Aleutian group, Alaska; *Certhia familiaris zelotes* OSGOOD, Sierra Creeper, Cascade Mountains of Oregon and the Sierra Nevada of California; *Chamæza fasciata phœbe* OSGOOD, Coast Wren-Tit, Coast region of Oregon and California from Astoria, Oregon to Marin Co. California; *Regulus calendula grinnelli* W. PALMER, Sitka Kinglet, Sitka district, Alaska; *Hylocichla ustulata almae* OBERH., Alma's Thrush, Yukon Basin, south to the Rocky Mountains region, and west to Utah and eastern Nevada.

The following changes are also of interest: Our *Colaptes cafer* becomes *Colaptes cafer*

*collaris*, the former being restricted to Mexico; *Sayornis nigricans semiatra* is assigned to the Coast as follows: "Pacific Coast of the United States and Mexico, from Oregon to Colima, eastward to Arizona"; *Zonotrichia leucophrys intermedia* becomes *Zonotrichia l. gambellii*, while the former *Zonotrichia leucophrys gambellii* is changed to *Zonotrichia l. nuttalli*.



## COMMUNICATIONS.

## A BOON FOR OOLOGISTS.

Editor CONDOR:—

A saturated solution of cooking soda is quite effective for removing embryos. As an illustration of its work, last night at 6 P. M. I found a Black-throated Gray Warbler's nest with four eggs, certainly not less than three-fourths incubated, the shell being so soft that the drill sank into it. I put in as much soda as the eggs would hold and changed it once during the evening. This morning they were reasonably easily blown before 8 A. M., two perfect specimens, the holes being not much larger than for fresh eggs; the other two have a small nick in each hole but are perfectly strong. The embryo was shaved off with a sharp knife as it was forced out. It was equally successful on Northwest Crow 1-5, California Jay 1-6 and Oregon Junco ¼. It is probably too late for many to try it this year, but possibly you can test it. The principal advantage over other chemicals is that it does the work quickly.

CHAS. W. BOWLES.

Waldo, Oregon, June 15, 1901.

[We were happily enabled to test Mr. Bowles' process on a badly incubated set of Calaveras Warbler, the results being a pleasant surprise. By blowing out the softer parts of the embryos and filling the eggs with a saturated solution of soda, all blew readily on the following morning. As Mr. Bowles points out, the merit of using soda is in its quick results, thus enabling one to blow the egg before the shell has softened.—ED.]

## USE OF COLLODION TO PREVENT ARSENICAL POISONING

Editor THE CONDOR:—

All ornithologists are aware that there is more or less danger in the handling of arsenic in preparing specimens. If a small particle finds lodgment in a cut, a sore is the result. Painting the cut and around the finger nails with collodion before using arsenic prevents all this. It forms a smooth coating, and used in that way is harmless, clean and leaves no stain.

Fort Collins, Colo.

W. L. BURNETT.

## GENERAL NEWS NOTES.

C. W. RANDALL, JR., of Oakland, is spending the summer months at Cisco, Cal.

WALTER B. SAMPSON of Stockton, Cal., reports a set of Fulvous Tree Duck 1-24, taken in Merced Co., in June.

LYMAN BELDING spent several days in June at Summit, one of his favorite old-time observation grounds in the Sierras.

WALTER K. FISHER has been engaged in collecting for the Biological Survey near Baird, Shasta Co., Cal., for several weeks past.

COOPER CLUB members were represented at the commencement exercises at Stanford University in June as follows: The degree of A. M. was conferred upon Joseph Grinnell and J. F. Illingworth and that of A. B. upon Walter K. Fisher, Edmund Heller and Robert E. Snodgrass.

LOREN E. TAYLOR of Fyffe, El Dorado Co., Cal. has received an appointment as forest ranger on the Lake Tahoe Forest Reservation. Mr. Taylor's intimate knowledge of forestry and natural history will render his ranger work the more effective, while the opportunity afforded him of studying the fauna of the higher Sierras will doubtless be improved.

PROF. F. E. L. BEAL of the Biological Survey has been in California since early in June, visiting the principal orchard districts for the purpose of collecting stomachs of various birds, which will be analyzed and which will furnish the basis for further reports on the food habits of our birds. W. Otto Emerson of Haywards accompanied Prof. Beal through the region about San Francisco Bay.

PROF. J. O. SNYDER of Stanford University, one of the Cooper Club's popular members, was married on June 2nd to Miss Francis Hamilton, the couple departing at once on an eastern tour to include the Buffalo Exposition and Prof. Snyder's home in Indiana. Prof. Snyder has been connected with the University faculty for eight years and has been closely associated with Dr. Jordan in his work of classifying fishes. Cooper Club members unite in extending cordial well wishes to Mr. Snyder and his bride.

ON June 20th the Beck Expedition returned from a seven-months' cruise in the Galapagos Archipelago with a considerable cargo of scientific specimens. R. H. Beck and Ernest Adams were the naturalists in charge and about 1,000 birds' skins and a representative collection of exotic birds' eggs were taken, the latter embracing many species not heretofore discovered. Stops were made at Clarion and Guadalupe Islands and an extensive collection of photographs was secured. A number of giant tortoises were taken and are at present being kept at Mr. Beck's home at Berryessa. The expedition reports many interesting sights, including the eruption of several volcanoes.

THROUGH press dispatches the ornithological world became aware of the extremely sad and violent death which came to Francis J. Birtwell at Albuquerque, N. M., on June 29th. A dispatch conveys the particulars of Mr. Birtwell's demise as follows: "The couple were married in the Highlands only five weeks ago, and from here they journeyed to the Pecos country on their wedding tour. Last Friday morning Mr. Birtwell ascended a lofty pine tree to procure a bird's nest and while at a distance of seventy-five feet from the ground a heavy wind began swaying the tree. He called to his wife for aid and soon after ropes were thrown to him. He placed a loop beneath his armpits and the men at the other end of the rope began lowering the human weight. When Birtwell was within thirty feet of the ground the knotted rope lodged in the forks of the tree and in some unaccountable manner the rope slipped from under one arm and the hemp fastened about the throat of the unfortunate man. Mr. Birtwell struggled for several minutes to free himself from his precarious position and the men on the ground put forth every effort to release him, but all in vain. Finally, the struggling ceased and then it was first discovered that the man was dead. An hour after the body was lowered to the ground and an inquest was held."

Mr. Birtwell was well and favorably known to ornithologists as a writer on the birds of New Mexico and had in view at the time of his death an elaborate work to be entitled "The Ornithology of New Mexico." His writings in *The Osprey* during Mr. Coues regime, on Aptosochromatism received considerable attention at the hands of ornithologists, many dissenting from the theory in favor of molt, while Dr. Coues expressed to a greater or less degree his belief in aptosochromatism. Mr. Birtwell was a brilliant and promising ornithologist and general regret is felt that such a career should have been so abruptly closed.

## THE CONDOR.

Bulletin of the

COOPER ORNITHOLOGICAL CLUB  
OF CALIFORNIA.Published bi-monthly at Santa Clara, Cal., in the interests  
and as Official Organ of the Club.CHESTER BARLOW, - - - Santa Clara, al..  
Editor and Business Manager.WALTER K. FISHER, Stanford University Cal.  
HOWARD ROBERTSON, Box 55, Sta. A., Los Angeles.  
Associates.

Subscription, (in advance)	- - -	One Dollar a Year.
Single Copies,	- - -	25 Cents.
Six Copies or more of one issue,	- - -	12½ Cents Each.
Foreign Subscription,	- - -	\$1.25.
Fees to Honorary Members and to Active Members not in arrears for dues.	- - -	

Advertising rates will be sent on application.

Advertisements and subscriptions should be sent to the  
Business Managers.

Exchanges should be sent to the Editor-in-Chief.

Entered at the Santa Clara Post-office as second class  
matter.

This issue of The Condor was mailed July 15.

## EDITORIAL NOTES.

The Tenth Supplement to the A. O. U. Check-List appears in the July *Auk* and ornithologists may again breathe freely, including also the describers of new subspecies, whose feathered idols have been relegated to that bourn whence they seldom return. But seriously speaking, the supplement contains numerous changes in nomenclature and a goodly array of new species and subspecies finds place upon the list. The list of non-accepted species and subspecies is surprisingly large, but one must feel it impossible to comprehend upon which certain characters one subspecies is accepted and another rejected. We note surprising action in the case of *Pipilo fuscus carolinus* McGREGOR, described in THE CONDOR (1, 1899, p. II). Mr. McGregor subsequently pointed out that the type was a bird in freshly-acquired fall plumage, and that the alleged race should be relegated to synonymy (*Pac. Coast Avifauna*, 1901, p. 15), but instead has occurred the unfortunate action of giving the subspecies a place on the check-list. It is not, therefore, surprising that the lay ornithologist should marvel at the mysteries of our check-list.

An editorial in *The Osprey* for May comments upon the inaptness of the use of bird names as titles of magazines devoted to ornithology. This is a conclusion which every thinking person must have evolved who has endeavored to solve the relationship of *Plantus impennis*, of *Botaurus lentiginosus*—habitus of the marsh—or of our western *Gymnogyps*—proud and majestic though he may be—to the various magazines bearing these birds'

common and more euphonious cognomens. The association of any of these names with the magazines bearing them suggests nothing, and this being an age of progression, we shall expect to see our contemporary adopt its own sensible advice and head the reform movement. The editorial in question suggests such titles as *The Wilsonia*, *The Audubonia*, etc., as being properly applicable to the American bird magazine.

We had expected to present several half-tones of interesting Galapagos bird subjects in this issue, but the lateness of arrival of the expedition and consequent delay in developing the numerous negatives secured, precludes the appearance of the anticipated cuts until our September issue. Messrs. Beck and Adams will also contribute articles to THE CONDOR touching on the Galapagos fauna and their visit to that interesting spot,—Guadalupe Island.

We bow a gracious acknowledgment to Lieut. Jno. W. Daniel Jr., who recently attested his faith in THE CONDOR by enclosing a \$5 bill, covering the current volume and four years' advance subscription.



## SAVE THE BIRDS' STOMACHS.

We would earnestly request members of the Cooper Ornithological Club who collect birds' skins to have the bird render a double value to science by preserving the stomachs for examination. As is generally known the Department of Agriculture is engaged in determining the foods of various birds, upon which results are based bulletins of great economic value. Prof. F. E. L. Beal is at this time engaged in collecting stomachs in California and at the request of this magazine submits the following suggestions for those who may care to undertake the work:

"The Biological Survey is desirous of procuring the stomachs of birds for the purpose of investigating their food habits. In furtherance of this object it solicits the cooperation of the ornithologists of California and requests that they preserve the stomachs (gizzards and crops) of such birds as they may collect. The Survey will furnish on application blank schedules for recording data, tags for numbering the stomachs and franked envelopes for mailing. When collected, the stomachs should be placed in alcohol or formalin for at least a week. Before forwarding to the Department they should be taken out and dried for half an hour or so; then placed in a baking powder can or cigar box, wrapped with a franked envelope on the outside and mailed. In order to reimburse the collector for the outlay for alcohol etc., the sum of five cents will be paid for each stomach sent in."

## QUERY COLUMN.

## ANSWERS.

6. Replying to Mr. Grinnell's query, "Does the Rufous Hummingbird breed in California?", so far as my observations go, it does. On April 14, 1896 I photographed a nest of what later proved to be *Selasphorus rufus*, as we shall see. This nest was placed in a climbing Cherokee rose, running over the rear gable of my home at Haywards. It might be asked how I knew this was a Rufous Hummingbird, since the males do not attend the females during nidification. Contrary to the observations of some late writers I have twice seen the male try to drive the female back to her nest, I had just stepped out on the porch at sun-rise when I saw the female leave the nest, darting through another clinging rose at the end of the porch in an effort to pass behind it. The male made his appearance at once, darting down at the female bird and after a few sharp twitters of anger which seemed to settle the matter of her leaving the nest so early, they both passed out of sight and not once did I see the male again during the incubation period.

The only other instance I have recorded of the male being seen was in the middle of June, 1879, while camping in the lower end of Calaveras valley Santa Clara Co., Cal. After setting up our table under a spreading sycamore and eating breakfast, a hummingbird flew off her nest some six feet above the top of our table. In this case the male was noted some half hour later trying to drive the female to her nest, which she later forsook altogether on account of the noise we made.

W. OTTO EMERSON.

*Haywards, Cal.*



The minutes of the Southern Division are omitted from this issue, not having been received up to the time of going to press.

## A SUGGESTION FOR FORMING CLUB CHAPTERS.

At the rate the club is increasing in membership we shall soon be confronted with an entirely new condition and one that will demand different methods of procedure. In the past our membership has been located near the centers of most interest in ornithology and it was a comparatively easy matter for the members to meet at any stated place.

The membership now, however, is spreading out constantly through the smaller towns until in Southern California, they are as far away from the present meeting places as 140 miles. At that distance or even one-fourth of it, it is a serious and expensive undertaking to attend a meeting. The same is true of the Northern Division.

The result is that many of our enthusiastic members are deprived of the pleasure of attending the meetings of the club. This, in time, will force us to adopt different methods, and it occurs to me that at the present time it is proper to discuss the best methods of meeting it. I would therefore suggest for consideration the adoption of a plan whereby circles, extensions, local branches or whatever it is best to call them, of the club at large, under certain conditions, might be formed. For instance, we have an enthusiastic member in some town remote from present centers. It would be an easy matter for that member to find out those in the vicinity likely to be interested in ornithology (and it is surprising how much latent interest there is which only needs arousing to bring it into activity). Then issue a call for a meeting, state the purposes of the club and get as many to join as is possible. The local papers are always glad to help a movement of this sort, and many men not particularly interested in ornithology often lend their help by joining such a circle. One or two persons in a locality could easily start such a movement and with the addition of three or four more could form a strong nucleus which would rapidly grow into an active circle.

Local officers could be elected and reports of meetings published in THE CONDOR as at present. Under this system I believe the club at large would increase wonderfully in membership and the present members, scattered as they are, would derive much more benefit from their association with the club.

FRANK S. DAGGETT.  
*Pasadena, Cal.*



Mr. and Mrs. C. Barlow spent two weeks in June in camping with L. E. Taylor studying ornithology along the Placerville-Tahoe Road.

## PUBLICATIONS RECEIVED.

CHAPMAN, FRANK M., A New Race of the Great Blue Heron with Remarks on the Status and Range of *Ardea wardi*. (Bull. Am. Mus. Nat. Hist. XIV. Art. VIII, Apr. 15, 1901).

HORNADAY, WM. T., Notes of the Mountain Sheep of North America, With a Description of a New Species. (Reprinted from Annual Report N. Y. Zoological Society, June 1, 1901).

MORRIS, ROBERT O., The Birds of Springfield and Vicinity. 46 pp., Springfield, Mass. 1901 (See notice).

SHUFELDT, DR. R. W., Notes on the Osteology of *Scopus umbretta* and *Balaeniceps rex* (Ext. Journ. of Anat and Phys. XXXV 405-412. 1 pl.).

SHUFELDT, DR. R. W., Osteology of the Penguins. (Ext. Journ. of Anat. and Phys. XXXV. 390-404. 1 pl.)

SHUFELDT, DR. R. W., Osteology of the Herodiones. (Reprint Annals Carnegie Museum, pp. 158-249).

STONE, WITMER, On Moult and Alleged Color-change in Birds. (Ibis, April, 1901).

STRONG, R. M., A Quantitative Study of Variation in the Smaller North-American Shrikes. (Reprinted from Am. Nat. XXXV, No. 412).

*American Ornithology*, I, Nos. 3, 4, 5, 6 and 7, Mar., Apr., May, June and July.

*Annual Report of the Directors of Field Columbian Museum*, Vol. I, No. 6, Chicago, Oct. 1900.

*Annual Report Game and Forestry Warden of Oregon*, 1889-1900.

*Annual Report U. S. National Museum*, Part 2, 1897. Issued 1901.

*Annual Report U. S. National Museum*, 1899. Issued 1901.

*Auk, The*, XVIII, Nos. 2 and 3, April and July, 1901.

*Bird-Lore*, III, Nos. 2 and 3, Mch-Apl, May-June, 1901.

*Birds & Nature*, IX, Nos. 3, 4, 5, Mch, Apl, May, X, No. 1, June, 1901.

*Circular*, No. 33 Biological Survey; Protection of Birds and Game; Directory of State Officials and Organizations for 1901. April 18, 1901.

*Journal of Maine Ornithological Society*, III, Nos 1 and 2, Jan, Apl, 1901.

*Land of Sunshine*, XIV, No. 3, March, 1901.

*Maine Sportsman*, VIII, Nos. 91, 92, 93, 94. Mch, Apl, May; II, No. 1, 2, June and July, 1901.

*Maine Sportsmen*, VIII, Nos. 91, 92, 93, 94. Mar., Apl, May, June.

*Nature Study*, I, Nos. 10, 11, 12, Mch, Apl, May; No. 1, 2, June and July, 1901.

*Notes on Rhode Island Ornithology*, II, No. 2, April, 1901.

*Ohio Naturalist*, I, Nos. 5, 6, 7 and 8; March, April, May, June.

*Oologist, The*, XVIII, Nos. 4, 5, 6; April, May and June, 1901.

*Ornithologisches Jahrbuch*, XII, Nos. 1, 2-3; Jan-Feb, Mch-June.

*Osprey, The*, V, Nos. 3, 4, 5. Jan-Feb, Mch-Apl, May, 1901.

*Our Animal Friends*, XXVIII, Nos. 7, 8, 9, 10, 11; March, April, May, June, July, 1901.

*Our Dumb Animals*, XXXIII, Nos. 10, 11, 12, Mch, Apl, May; XXXIV, No. 1, June, 1901.

*Plant World*, IV, Nos. 2, 3, 4, 5; Feb, Mch, Apl, May, 1901.

*Popular Science*, XXXV, Nos. 4, 5, 6, 7; April, May, June, July.

*Proceedings U. S. Nat. Museum*, Vols. 19, 20, 21 and 22.

*Proceedings (Abstract) of the Delaware Valley Orn. Club* for, 1900. Published 1901.

*Recreation*, XIV, Nos. 3, 4, 5, 6; Mch, Apl, May, June; XV, No. 1, July, 1901.

*Report of the Secretary of Smithsonian Institution* 1899-1900.

*Wilson Bulletin*, Nos. 34 and 35; March 30, 1901, May 30, 1901.

## Official Minutes of Northern Division.

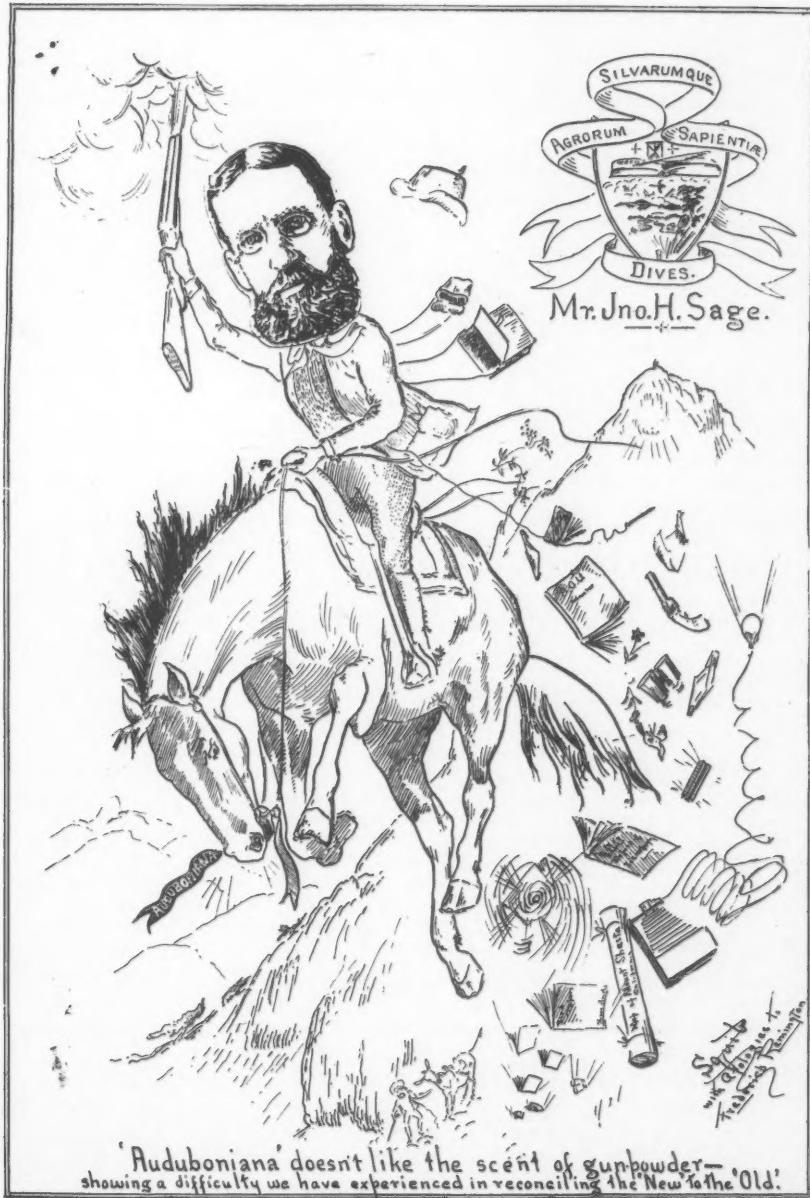
The July meeting was held at the residence of C. Barlow in Santa Clara, Prof. F. E. L. Beal being present as a visitor. W. Otto Emerson acted as president for the evening. The following persons were elected to active membership: Miss Ora Boring, Palo Alto, Cal., Willis H. Jackson, Pescadero, Cal., and H. R. Noack, Berkeley, Cal. The names of H. P. Goodman and George Grimm of Napa were recommended for membership. The resignation of James M. Hyde was accepted.

The prepared draft for a new constitution was given its first reading and ordered transmitted to the Southern Division for similar action. Rollo H. Beck spoke on "The Occurrence of some North American Birds as observed on a trip to the Galapagos Islands." A paper by Walter K. Fisher, entitled "Breeding of *Hesperocichla navaia* in California" was read, after which Prof. Beal addressed the meeting with reference to the work being done by the Biological Survey in the matter of analyzing the contents of bird's stomachs. The Division meets on September 7 at the residence of R. S. Wheeler in Alameda.

C. BARLOW, Secretary.

*The Birds of Springfield and Vicinity* is the title of a recently published work by Robert O. Morris of Springfield, Mass. The work consists of an introduction and an annotated list of 254 species observed within the vicinity of Springfield, together with a bibliography of the literature pertaining to the birds of this region. The work is bound in cloth and, barring typographical errors in its nomenclature, is neatly printed. Published by Henry R. Johnson, Springfield, Mass.

"SNAP SHOTS AT PROMINENT ORNITHOLOGISTS." NO. IV.



'Auduboniana' doesn't like the scent of gunpowder—  
showing a difficulty we have experienced in reconciling the 'New' to the 'Old.'

The American Ornithologists' Union  
**CHECK-LIST OF NORTH AMERICAN BIRDS,**  
Second Edition, 1895, Thoroughly Revised.



The preface to this work defines its scope and object and includes selections from the A. O. U. Code of Nomenclature, of special importance in the present connection. The table of contents consists of a systematic list of orders, sub-orders and families of North American birds. The check-list proper gives the scientific and common name, number in previous list, and geographical distribution of the 1,068 species and sub-species, constituting the North American Avifauna. This is followed by a list of birds of doubtful status, and a list of the fossil birds of North America.

This new edition has been carefully revised; the recent changes in nomenclature and species and sub-species described since the publication of the first edition in 1886 are included, while the portion relating to geographical distribution has been much amplified.

CLOTH, 8vo, 372 Pages, Price, \$2.00.

THE AU<sup>K</sup>

A Quarterly Journal of Ornithology.

J. A. Allen, Editor. F. M. Chapman Assoc. Editor.

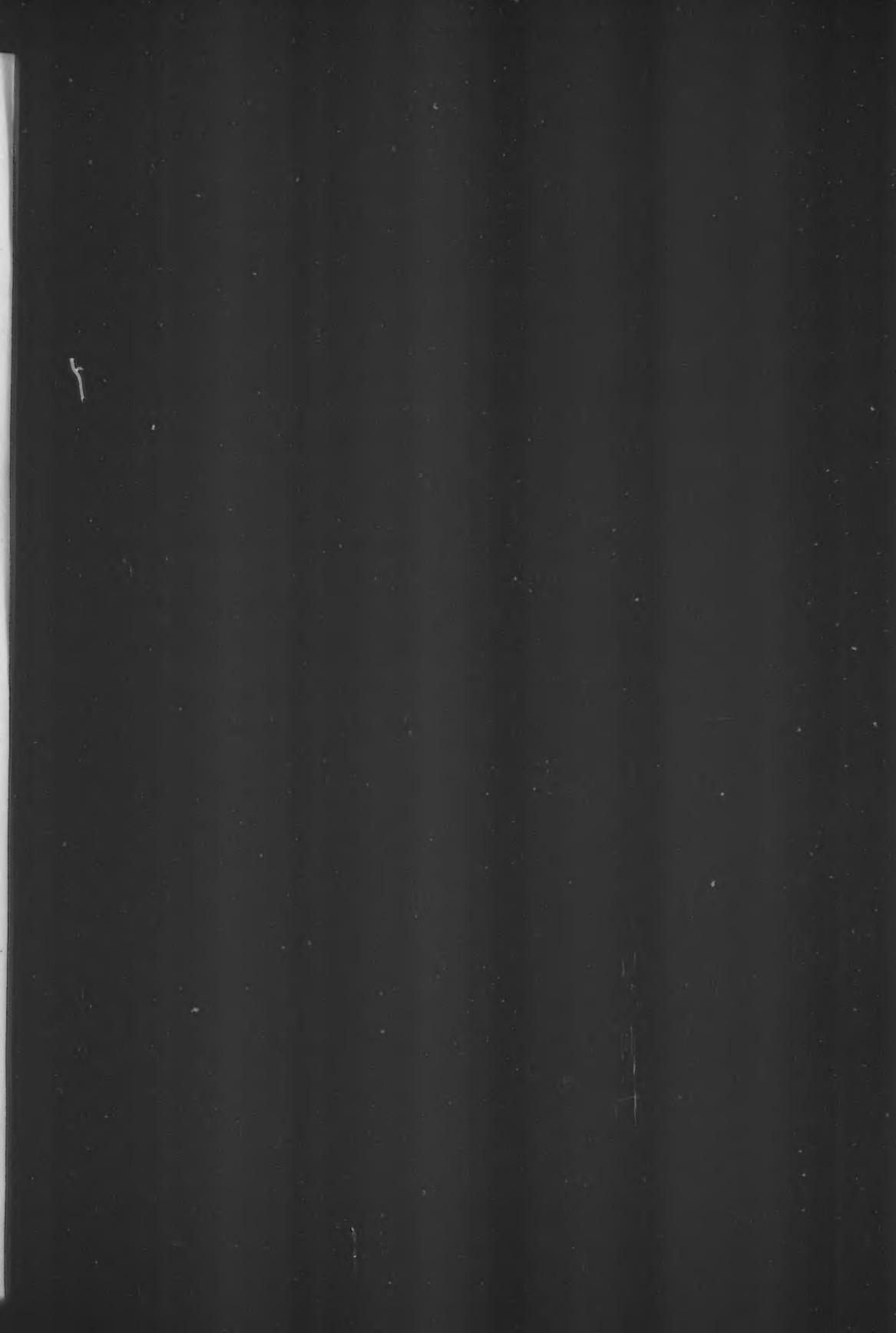
As official organ of the Union, 'The Auk' is the leading ornithological publication of this country. Each number contains about 100 pages of text, a handsomely colored plate, and other illustrations. The principal articles are by recognized authorities and are of both a scientific and popular nature. The department of 'General Notes' gives brief records of new and interesting facts concerning birds, contributed by observers from throughout the United States and Canada. Recent ornithological literature is reviewed at length and news items are commented upon by the editors. 'The Auk' is thus indispensable to those who would be kept informed of the advance made in the study of birds, either in the museum or in the field.

Price of Current Volume, \$3.00. Single Numbers, 75 cts.

Wm. DUTCHER, Business Manager.

Agent of The American Ornithologists' Union for the Sale of its Publications.

525 MANHATTAN AVE.,  
NEW YORK CITY.





### Exchanges.

Each member of the Club, not in arrears for dues, is entitled to three exchange notices of 30 words each during the year; other subscribers, one such notice.

FOR EXCHANGE: Sets A. O. U. Nos. 3, 86, 155, 187, 223, 267, 271, 302, 483, 707a, 708, 735b, 764, Ring Pheasant and others. Send full list. Taylor's prices. D. WILBY, 27 Front St., W., Toronto, Ont.

NOTICE: I will exchange 100 data, size 6½ x 3½, printed on Diana bond paper, for every 50 cents worth of strictly first-class sets with complete data sent me. Sets returned if data are not entirely satisfactory. CLARENCE H. LUTHER, Box 322, Fayetteville, Ark.

FINE EASTERN SKINS including Ruffed Grouse, hawks, warblers and many others to exchange for first-class skins of all hummingbirds. Any standard price-list as basis. Send list of what you have, and receive mine. E. VAN L. SMITH, 109 Good St., Akron, O.

## THE OÖLOGIST

Of Albion, N. Y.

### Is the Oldest Publication in America . . .

THE OÖLOGIST is the cheapest "Bird" publication in the world (for only 50 cents you receive \$1.00 worth of premiums, your selection, 25c. worth of advertising and the OÖLOGIST for a whole year.)

THE OÖLOGIST, has a larger paid circulation than all other "Bird" publications in America combined.

THE OÖLOGIST has long been recognized the best Advertising Medium in its line in the world. The "*Country Gentlemen*" is the leading Agricultural newspaper in America, and in soliciting advertising for its columns, it makes its strongest hit in the following statement: "As to quantity of circulation it publishes many more 'Want Ads' than all other papers combined. You doubtless know what a 'Want Ad' circulation must be and always is?"

From this same stand point THE OÖLOGIST's rank among publications devoted not only to Ornithology but Natural History as well, is identical to that of the *COUNTRY GENTLEMEN* among agricultural publications.

THE OÖLOGIST has very few half-tones and contains only 16 pages each issue—one-half of which are advertising.

During the past fifteen years, (THE OÖLOGIST's age) many superior "Bird" publications and scores of inferior ones have dropped by the way. THE OÖLOGIST, however, is still issued each month and a sample copy of a recent issue can always be obtained by addressing a postal to

Frank H. Lattin, Publisher,

Albion, N. Y.

JAMES P. BABBITT.

Dealer in  
Supplies for the Naturalist and Taxidermist,  
Fine Glass eyes a Specialty.

TAUNTON, MASS.

Illustrated catalogue and bargain list of  
Birds' Eggs and Skins upon application.

## Stevens Ideal Rifle. No. 44.



Price Only \$10.00.

Made in all the standard calibers both Rim and Center Fire. Weight about 7 pounds. Standard barrel for rim fire cartridges, 24 inches. For center-fire cartridges, 26 inches.

If these rifles are not carried in stock by your dealer, send price and we will send it to you express prepaid.

Send stamp for catalog describing complete line and containing valuable information to shooters.

THE J. STEVENS ARMS AND TOOL CO.  
P. O. Box 2823 CHICOPEE FALLS, MASS.

## BIRD LORE FOR 1901.

BIRD-LORE's special aim during the coming year will be to assist teachers and students of birds by telling them just what to study and just what to teach at the proper season. It will, therefore, publish a series of articles, on the birds of a number of localities, including the vicinity of Boston, New York, Philadelphia, Chicago and San Francisco. To these will be added 'Suggestions for the Months' Study' and 'Suggestions for the Months' Reading.' The whole thus forms a definite plan of study which, it is believed, will be of the utmost value to the instructor, to the independent observer, and to bird-clubs and natural history societies. In this connection much assistance will be rendered by BIRD-LORE's *Advisory Council*, composed of over fifty prominent ornithologists, residing throughout the United States and Canada, who have consented to respond to requests for information and advice.

While a number of the more general articles of the year will bear on the months' subject for study, there will also be contributions of wide popular interest, among the more important of which may be mentioned an address on Audubon, by Dr. Elliott Coues; letters written by Audubon in 1827; John Burroughs' list of his rare bird visitors, Frank M. Chapman's fully illustrated account of a bird-nesting expedition with the genial naturalist; Ernest Seton-Thompson's 'How to Know the Hawks and Owls' (illustrated); Tudor Jenks' 'From an Amateur's Point of View'; T. S. Palmer's 'Ostrich Farming in America' (illustrated); F. A. Lucas' 'Birds of Walrus Island,' with remarkable illustrations; H. W. Henshaw's 'Impressions of Hawaiian Birds'; C. Will Beebe's illustrated account of some of the birds under his charge at the New York Zoological Garden, and an important paper on 'Bird Protection in Great Britain,' by Montagu Sharpe, chairman of the English Society for the Protection of Birds.

20 CENTS A NUMBER, \$1.00 A YEAR.

SEND TEN CENTS FOR A SPECIMEN COPY.

The Macmillan Co.,

Mulberry and Crescent Streets,  
HARRISBURG, Pa.

## THE PLANT WORLD,

AN ILLUSTRATED MONTHLY JOURNAL OF POPULAR BOTANY.

Edited by

F. H. Knowlton, Ph. D.  
Charles Louis Pollard, A. M.

*The Plant World*, now in its third year, is an illustrated journal of 24 pages each month, containing articles on a wide variety of botanical subjects written in popular non-technical language. Many of the most eminent American botanists write for it, and it will be found of interest to all plant lovers, both amateur and professional. It is trying to do for plants what THE CONDOR is doing for birds.

The leading features of Volume III is a copiously illustrated article issued in the form of a monthly supplement on The Families of Flowering Plants, giving a complete account of these groups.

Subscription price, including Supplement, \$1.00 per year. Supplement alone, 50c. Address all communications to

The Plant World Co.,

321-323 4½ Street, N. W.,  
WASHINGTON, D. C.

Send for sample copy.

